REMARKS

This submission is in response to the Official Action dated October 5, 2004. Claims 1, 3, 5, 6, and 10 have been amended. Claims 11 and 12 have been added. No new matter is added. Claims 1-12 are presently pending. Claims 6-10 stand rejected. Reconsideration of the above identified application, in view of the above amendments and the following remarks, is respectfully requested.

Acknowledgement of Allowable Subject Matter

Applicant thanks the Examiner for the acknowledgement of allowable subject matter in claims 1-5.

Status of the Specification and Claims

Claims 1, 3, 5, and 10 and the specification have been amended to more accurately describe the present invention. Specifically, "rudder angle" has been changed to "blade angle."

Claim Rejection - 35 U.S.C. § 112

Claims 6 and 7 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner states that the phrase "without performing altitude control" is unclear and indefinite since the claimed limitation of "climbing to a first altitude while increasing a climb rate" constitutes "altitude control." The phrase "without performing altitude control" has been removed from claims 6 and 7. Based on the foregoing, Applicant respectfully requests that the rejection of claim 6 and 7 be withdrawn, and reconsideration is respectfully requested.

Claim Rejection Over Slider

Claims 6 and 7 have been rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 6,527,225 to Slider, Jr. et al. ("Slider"). Applicant respectfully traverses this rejection for the reasons set forth below.

Amended claim 6 is directed to a takeoff method of an unmanned helicopter including a first climbing step of climbing to a first altitude while increasing a climb rate by increasing a collective pitch blade angle command at a constant rate; and a second climbing step of climbing while performing altitude control from the first altitude.

Slider discloses a method for performing a takeoff maneuver in an automated manner. Specifically, a takeoff profile 3 including a takeoff point 13, a flight path 15, and a takeoff decision point (TDP) 5 is generated. An automated takeoff system 35 is engaged to access the takeoff profile 3. Periodic position data of the aircraft is received and is compared to the takeoff profile 3 to compute a plurality of deviations each time the position data is received. The plurality of deviations are output to a display and converted into a plurality of control commands. Slider discloses maneuvering the aircraft along a specified flight path in response to the control commands. Slider does not disclose increasing a climb rate by increasing a collective pitch blade angle command at a constant rate, as set forth in claim 6. Thus, Slider does not disclose the first climbing step as set forth in claim 6. Claim 7 depends on claim 6 and is patentable for at least the same reasons.

Based on the foregoing, the rejection of claims 6 and 7 under 35 U.S.C. § 102(a) should be withdrawn, and reconsideration is respectfully requested.

Claim Rejection Over Kendall Jr.

Claims 6-10 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,527,225 to Kendall, Jr. et al. ("Kendall Jr."). Applicant respectfully traverses this rejection for the reasons set forth below.

Kendall Jr. discloses remote control of a robot aircraft. In a first step of the take-off, the helicopter leaves the ground and is held at a position above the ground (Kendall Jr., column 41, lines 14-17). In a second step, the helicopter moves forward (Kendall Jr., column 41, lines 27-35). Altitude control is established by a remote operator or by including a means for sensing the altitude and automatically creating a signal whenever the helicopter deviates from a selected

altitude (Kendall Jr., column 21, lines 21-25). In a first step of the landing, the air speed of the helicopter gradually decreases until the helicopter hovers steadily over the landing spot (Kendall Jr., column 42, lines 10-12). In a second step of the landing, the collective pitch is reduced and the helicopter settles gradually to the ground (Kendall Jr., column 42, lines 12-14).

Kendall Jr. discloses that during the process of automatic altitude control, the circuitry of the helicopter is capable of sensing changes in altitude and creating mechanical motion responsive to it. However, like Slider, Kendall Jr. does not disclose increasing a climb rate by increasing a collective pitch blade angle command at a constant rate, as set forth in claim 6. Claim 7 depends on claim 6 and is patentable for at least the same reasons.

Regarding claim 8, Kendall Jr. does not disclose "a first descending step of stepwise decreasing a descent rate" during landing. Kendall Jr. discloses that the air speed is reduced gradually as the robot approaches landing and that the helicopter "settles gradually to the ground" (Kendall Jr., column 42, lines 4-14), but does not state that the descent rate decreases in a stepwise manner. Claim 9 depends on claim 8 and is patentable for at least the same reasons.

Claim 10 sets forth a landing method of an unmanned helicopter including the step of "determining that the helicopter lands, if the blade angle command of a predetermined value or less continues for a predetermined time." Kendall Jr. discloses that the remote operator reduces the collective pitch so that the helicopter will settle gradually to the ground and that after the landing gear contacts the ground, the engine is brought to idle (Kendall Jr., column 42, lines 11-17). However, Kendall Jr. does not disclose a step for determining when the helicopter lands based on the timing of a blade angle command, as set forth in claim 10.

Based on the foregoing, the rejection of claims 6-10 under 35 U.S.C. § 102(b) should be withdrawn, and reconsideration is respectfully requested.

For the reasons discussed above, we believe claims 6-10 to be patentable over the applied references.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Dated: January 4, 2005

Respectfully submitted,

By _____
Denise L. Poy
Registration No.: 53,480

DARBY & DARBY P.C.
P.O. Box 5257
New York, New York 10150-5257
(212) 527-7700
(212) 753-6237 (Fax)
Attorneys/Agents For Applicants